impossible for a sc ce node, in a dynamic varying netw k, to determine the entire path to the destination node as is done in Spiegel et al. (column 1, lines 15-26).

Spiegel et al. does mention the dynamic updating of *link costs* in the network, but one of ordinary skill in the art would appreciate that updating of link costs has nothing to do with changes in network topology. Link cost information is periodically broadcast across the network of Spiegel et al. to allow the source nodes and the intermediate nodes that are capable of rerouting, to use the maps of the network topology to compute routing tables. Stations in the network use the same measure of link costs for the various links (Figures 6 and 7). Thus, the link costs themselves are not changing dynamically, and, as messages are relayed across the network of Spiegel et al., from a source to a destination node, the messages are not rerouted based on the link costs

The Applicant respectfully submits that claims 1-6, and 16 are not obvious in view of Spiegel et al.

The method of claim 1 is fundamentally different from the operation of the network contemplated by Spiegel et al. As stated in the final subparagraph of claim 1, each station "monitors the quality of the signal path to other stations", and, significantly, "the selection of each further station" for onward transmission of messages is made "opportunistically, at the time of transmission of the message data" according to various criteria "including the monitored quality of the signal path between the transmitting station and the potential intermediate stations" so that transmissions take place "during peaks of opportunity". Therefore, the claimed invention monitors the signal path quality between stations in a network, and each relaying transmission which occurs involves the dynamic selection of one of a number of potential intermediate stations with the selection being made, *inter alia*, on the basis of the signal path quality to those potential stations. The system of Spiegel et al. does not discloses such an arrangement, and the concept of making transmissions during peaks of opportunity is meaningless in the context of the system of Spiegel et al.

Although the Examiner submits that the system of Spiegel et al. does disclose opportunistic selection of an intermediate station, the passage that the Examiner cites (column 2, lines 33 *et seq.*), taken as a whole, does not support this view. The cited passage clearly indicates that, prior to transmission, a selection is made at the source node of the route to be taken from the source node to the destination node. In another words, a predetermined route through the network is the starting point. Subheading (c) of the cited passage contemplates the selection of an alternative route from one or more of the intermediate nodes in the route if there is no "acceptable link" in the predetermined route. This is done on the basis of the previously discussed predetermined routing tables. Thus, intermediate nodes in the network of Spiegel et al. use a trial and an error process of finding an alternate route out of several alternatives if the first predetermined route is "not acceptable". Such a system does not teach or suggest the opportunistic selection of the present invention.

In addition, the predetermined route utilized by the system of Spiegel et al. requires that routing information be sent with a message from the source node (see Figure 3 of Spiegel et al.). In contrast, with the present system, routing information is not required and no dedicated routing information is passed across the network (see page 19, paragraph 4 of the present application) because no specific routing information is required for data flow across the network.

In the system of Spiegel et al., an attempt is made to establish a route consistent with a series of "acceptable links" based on the ability to reserve resources on each link for future message flow. A NACK message is used by the system Spiegel et al. to allow an intermediate node to inform its adjacent upstream node that sufficient resources are not available over the next hop to support the requested quality of service (column 8, lines 28 and 29) and that the node must find another route. This NACK message is relayed back to the source node (column 7, lines 28-50) so that the source node can identify blocked links. In another words, the NACK message is used at the source node to update its records so that the source node can identify previously blocked links when determining future routes.

In the present invention, however, the purpose of transmitting confirmation data back from intermediate stations to previous stations indicates a peak of opportunity has been found and that the message has successfully been transmitted forward. The absence of a confirmation message could be because no peak of opportunity has been found by the intermediate station for onward transmission of the message, or because there was no opportunity for transmission of the confirmation message itself. In either case, if the previous station does not receive the confirmation message, it must assume that the message has not been transmitted onward and will re-send the message. A lost or stuck NACK, on the other hand, would not result in the main message being re-launched.

The above remarks have demonstrated that Spiegel et al. does not teach or suggest all of the features of claim 1. Thus, the Applicant respectfully submits that the invention of claim 1 is patentably distinct from the cited prior references.

103

In addition, Spiegel et al. actually teaches away from the invention of claim 1. For instance, the Examiner concedes that the step of "transmitting confirmation data back from the first intermediate station {B} to the originating station (A) indicative of the onward transmission of the message data" is not taught by Spiegel et al. The reason such a step is not taught, however, is because such a step is unnecessary in the system of Spiegel et al., which utilizes predetermined routing. In contrast, the system of the present invention uses confirmation data, transmitted at each "hop" or onward transmission, because there is no predetermined routing and it is necessary to overcome possible dead end situations. Thus, a person of ordinary skill in the art would not add the feature of "transmitting confirmation data..." to the system of Spiegel et al. since it would be unnecessary and would burden the system without adding any useful functionality. Therefore, in addition to the distinguishing remarks advanced above, the Applicant respectfully submits claim 1 is patentably distinct from Spiegel et al. because

one of ordinary ski   the art would be discouraged fror. ..nodifying Spiegel et al. to define the invention of claim 1.

Claims 7 and 11-14 are rejected under 35 USC 103(a) as being unpatentable over Spiegel et al. and Hughes et al., U.S. Patent No. 5,357,507. In addition, claims 8-9 are rejected under 35 USC 103(a) as being unpatentable over Spiegel et al. and Kudo U.S. Patent No. 5,278,803. Finally, claim 15 is rejected under 35 USC 103(a) as being unpatentable over Spiegel et al. and Berland U.S. Patent No. 5,509,050.

Claims 7-15 are dependent either directly or indirectly on claim 1, and since dependent claims include all of the limitations of their corresponding base claims and any intervening claims, the Applicant respectfully submits that claims 7-15 are also allowable for at least the reasons given with respect to claim 1.

In view of the above remarks, the Applicant respectfully submit that the claims in their current form are in a condition appropriate for approval. Favorable reconsideration of this application is earnestly requested.

Respectfully submitted,

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